What is claimed is:

1. A multi-path detecting circuit for detecting multi-path timings by measuring a delayed profile of a propagation channel, comprising:

a short period delayed profile averaging part and a long period delayed profile averaging part for averaging the delayed profile in two different, i.e., short and long, cycle periods, respectively.

2. The multi-path detecting circuit according to claim 1, further comprising a threshold checking part for receiving the output of the short period delayed profile averaging part and checking whether the output exceeds a threshold value, a correlation peak retrieving part for receiving the output of the long period delayed profile averaging part and retrieving upper rank correlation peaks for every correlation profile, and a finger timing determining part for receiving the outputs of the correlation peak retrieving part and the threshold checking part.

3. The multi-path detecting circuit according to one of claims 1 and 2, comprising a long period profile storing part for storing the output of the long period delayed profile averaging part.

4. The multi-path detecting circuit according to claim 3, comprising a subtracter provided between the short period delayed profile averaging part and the

threshold checking part, for extracting the difference of the short period averaged delayed profile from the long period averaged delayed profile stored in the long period delayed profile storing part for each short period averaged delayed profile.

5. The multi-path detecting circuit according to one of claims 1 to 4, wherein the short period is set to about 10 msec., and the long period is set to about 100 msec.

6. The multi-path detecting circuit according to one of claims 1 to 5, which is used for a CDMA receiver having a RAKE finger part, to which the timing output from the finger timing determining part is supplied.

7. A multi-path detecting system for determining pathes to be allotted to RAKE finger on the basis of combination of a long period averaged delayed profile for averaging level variations due to fading and a short period averaged delayed profile for fast detecting new path generation.

8. A multi-path detecting system comprising:

a matched filter for outputting correlation value data concerning spread code and received signal;

a short period delayed profile averaging part for averaging delayed profile of measured channel path;

a long period delayed profile averaging part for

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power averaging the short period averaged delayed profile data for a long period and storing the power averaged data to a long period delayed profile storing part;

a subtracter for subtracting a difference from the stored long period averaged delayed profile whenever the short period averaged delayed profile is outputted;

a threshold checking part for outputting data of pathes to be added when the difference from the subtracter exceeds a predetermined threshold value;

a finger timing determining part for adding path allotment to RAKE finger part on the basis of the output of the threshold checking part;

a correlation peak retrieving part for retrieving correlation peaks up to upper rank N for every long period delayed profile storing part output;

a finger timing determining part for alloting the path timings to the RAKE finger part; and

a RAKE synthesizing part for synthesizing data received in the individual fingers with each multi-path.

9. A multi-path detecting system comprising steps of:

executing instantaneous delayed profile profile measurement by calculating correlation of spread codes and received signal to one another;

averaging the delayed profile for time such as to be able to smooth noise;

checking as to whether the time has elapsed;

outputting the result of the short period averaging

after the averaging for the time;

calculating the difference of the long period averaged delayed profile correlation data from the short period averaged data obtained for each sample;

checking, for each sample, as to whether a predetermined threshold value has been exceeded and, when the threshold value has been exceeded , outputting M sample numbers in excess of the threshold value;

alloting newly detected new pathes the fingers presently out of use or in the order of lower reception power level fingers.

averaging the short period averaged delayed profile for longer period of time;

checking as to whether the longer time has elapsed;

storing the long period averaged delayed profile data for every averaging period of the longer time;

selecting upper N to M rank correlation peaks of the stored profile; and

alloting these timings to the fingers.

10. A CDMS receiver using the multi-path detecting circuit according to claim 1 comprising:

an antenna part for receiving radio transmitted data;

a high frequency signal receiving circuit for frequency converting the received signal;

an A/D converter part for converting the output of the high frequency signal receiving circuit from analog signal to digital signal;

the multi-path detecting circuit for receiving signal from the A/D converter part, detecting multi-path timing and determining the detected multi-path timing as reception timing input to RKE finger part; and

a RAKE synthesizing part for synthesizing data from the RAKE finger part as received at each timing.

11. A CDMS receiver using the multi-path detecting system according to claims 7-10 comprising:

an antenna part for receiving radio transmitted data;

a high frequency signal receiving circuit for frequency converting the received signal;

an A/D converter part for converting the output of the high frequency signal receiving circuit from analog signal to digital signal;

the multi-path detecting circuit for receiving signal from the A/D converter part, detecting multi-path timing and determining the detected multi-path timing as reception timing input to RKE finger part; and
a RAKE synthesizing part for synthesizing data from the RAKE finger part as received at each timing.